MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2017/2018

DCS5018 – COMPUTER SYSTEMS & APPLICATIONS

(For Diploma students only)

2 MARCH 2018
9:00 a.m. – 11:00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **5 pages.**
2. Answer **ALL** questions in **Section A** on the **OMR sheet.**
3. Answer **ALL** questions in **Section B** in the **Answer Booklet.**

Section A : 20 Multiple Choice Questions (20 marks)

Instruction: *Shade your answers on the* ***OMR sheet.***

1. Which of the following is **NOT** an example of processor specification?
   A. Intel i5-2500 has 6MB L3 cache.
   B. Intel i7990x transfer rate is 20 Gbps.
   C. Intel i3-2100T has 2.50 GHz maximum clock speed.
   D. Intel i7 990X has six cores, each one using hyperthreading, so it simulates having twelve processors.

2. Which of the following is an example of optical drive?
   A. Hard Disk
   B. Memory Disk
   C. Magnetic Disk
   D. Digital Versatile Disc

3. When using Internet for research, you should not:
   A. evaluate sites for bias and relevance.
   B. consider who the author of the article is.
   C. look for a date on information to make sure it is current.
   D. assume everything you find is accurate and appropriate.

4. Each computer connected to the internet must:
   A. be an IBM PC.
   B. have unique IP address.
   C. be a supercomputer.
   D. have an optical drive storage.

5. Which of the following is **TRUE** about open source software?
   A. The program code is confidential.
   B. The program can be changed and freely distributed.
   C. The program code is subject to copyright protection.
   D. The program can be freely distributed as long as the program code is not changed.

6. What kind of software is responsible for back office operations such as billing production and inventory management?
   A. Enterprise Resource Planning
   B. Customer Relationship Management
   C. Computer Aided Design
   D. Project Management

7. Virtual memory is used when:
   A. booting fails
   B. RAM is full.
   C. a power-on self-test fails.
   D. troubleshoot your computer.

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8. All of the following statements are task performed by operating system **EXCEPT**:
   A. managing computer system's hardware and peripheral devices.
   B. performing housekeeping task such as disk defragmentation.
   C. provides an user interface for use to interact with computer.
   D. provides a consistent means for software applications to work with CPU.

9. The following are the procedures you can follow to ensure your system performs reliably **EXCEPT**:
   A. running disk defragmenter
   B. cleaning out unnecessary files
   C. running the Disk Defragmenter utility on your hard drive
   D. checking whether your motherboard supports NVDIA SLI or AMD CrossFire.

10. The _____ dictates how many instructions the CPU can process each second.
    A. clock speed
    B. cache memory
    C. number of cores
    D. front side bus performance

11. All of the following statements are **TRUE** about basic network hardware **EXCEPT:**
    A. a switch acts like a traffic signal on a network.
    B. a router transfers packets of data between two or more networks.
    C. an integrated network adapter is referred to as a network interface card.
    D. a network connection requires a modem, which directs packets through network based on information from Network Layer.

12. A _____ is a network that spans a large geographic area such as across cities, states, or countries. For example, a computer at a military base in Terendak, Melaka connected with a computer at a headquarters base in Sungai Besi, Kuala Lumpur.
    A. local area network (LAN)
    B. wide area network (WAN)
    C. personal area network (PAN)
    D. metropolitan area network (MAN)

13. Which of the following statement is **FALSE** about Organic Light-emitting Diode (OLED) displays?
    A. Thinner, lighter and more flexible.
    B. Brighter than Light-Emitting Diode (LED) screen.
    C. Draw more power than liquid crystal display (LCD) screen.
    D. Do not require backlighting like Liquid Crystal Display (LCD).

14. Smartphones and tablets are similar. They have the following features **EXCEPT**:
    A. similar processors
    B. similar operating systems
    C. touch-screen interfaces
    D. offer optical drives

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15. Gary McKinnon gained the access over 97 American military networks and left a message on their system "Your security is crap". He was extraordinary in specialty of utilizing computer from the age of 14. Gary McKinnon is a _____ hacker.
    A. white-hat
    B. black-hat
    C. grey-hat
    D. red-hat

16. Calvin has created a Gmail account by using "***calvin131013***" as a password. The password used by Calvin is considered a weak password because:
    A. contains letters and numbers
    B. contains one dictionary word
    C. contains name and birthdate
    D. contains 15 characters in length

17. Which of following is the **CORRECT** sequence for five phases in System Development Life Cycle (SDLC) process?
    A. Problem Identification > Design > Analysis > Development > Testing and Installation
    B. Problem Identification > Analysis > Design > Development > Testing and Installation
    C. Design > Analysis > Development > Testing and Installation > Problem Identification >
    D. Analysis > Design > Development > Problem Identification > Testing and Installation

18. Programmer can build application without specifying an algorithm. An example of this programming language is _____.
    A. SQL
    B. Java
    C. PROLOG
    D. FOTRAN

19. Microsoft Access is the most popular _____ database software.
    A. relational
    B. non-relational
    C. object-oriented
    D. multidimensional

20. Which of the following is **TRUE** about business intelligence system?
    A. A management information system (MIS) keeps track of everyday business activities.
    B. A decision support system (DSS) provides timely and accurate information that enables managers to make critical business decisions.
    C. A transaction-processing system (TPS) is designed to help managers develop solutions for specific problems.
    D. Office support system (OSS) is designed to improve communications and assist employees in accomplishing tasks.

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Section B: 4 Structured Questions (80 marks)
*Instruction: Write your answers in the **Answer Booklet**.*

Question 1 (Total: 20 Marks)

a) Mikael decided to upgrade his old computer. The specification of the computer are as follows:

CPU	Pentium 1.86 GHz, Dual Core, 2MB
RAM	2 GB DDR3
ROM	16MB
Hard Disk	1TB
DVD Drive	48X/24X/12X
Expansion Slot	2
Sound Card	Built-in
USB slot	3 (front x 1, back x 2)

Answer the following questions to help Mikael understand better on his new computer specification:

i. What does the "*1.8 GHz*" refer to? (2 marks)
ii. What is the difference between RAM and ROM? (4 marks)
iii. State **ONE** information that can be found in the ROM and RAM. (2 marks)
iv. What is the function of sound card? (2 marks)
v. What is the purpose of adding expansion card to the motherboard? (2 marks)

b) There are various kinds of media for storage such as external hard disk, optical drives and solid state drives. Explain **THREE** types of optical drive storages. (6 marks)

c) Social networking sites, blogs, and Wikis are commonly referred to as Web 2.0 technologies. What is Web 2.0? (2 marks)

Question 2 (Total: 20 Marks)

a) Each operating system has its own naming conventions or rules. List **FIVE** rules of file naming conventions in Windows. (5 marks)

b) Accessibility utilities are designed for users with special needs. Microsoft Windows includes an Ease of Access Center which is centralized location for assistive technology and tools to adjust accessibility settings. Discuss **FIVE** tools under accessibility utilities. (10 marks)

c) State **FIVE** characteristics of solid-state drive. (5 marks)

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Question 3 (Total: 20 Marks)

a) Hafiz is going to setup a LAN network at his new office. Explain **FOUR** benefits of having computer networks at his office. (8 marks)

b) Apple's iPhone is one of the best-selling smartphones in the world. State **TWO** primary input devices for smartphone. (2 marks)

c) Phishing is an attempt to obtain sensitive information such as usernames, passwords, and credit card details, often for malicious reasons, by disguising as a trustworthy entity in an electronic communication. Describe **FIVE** guidelines to avoid phishing to occur. (10 marks)

Question 4 (Total: 20 Marks)

a) Role of programmer is to convert problem solutions into instructions for the computer. Discuss **FIVE** generations of computer programming languages that can be used by the programmer. (10 marks)

b) Explain the **FOUR** steps of how data tables are created. (8 marks)

c) State **TWO** functions of database. (2 marks)

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